

**Calendar No. 1055**

110TH CONGRESS  
2D SESSION

**S. 150**

**[Report No. 110–484]**

To amend the Safe Drinking Water Act to protect the health of pregnant women, fetuses, infants, and children by requiring a health advisory and drinking water standard for perchlorate.

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IN THE SENATE OF THE UNITED STATES

JANUARY 4, 2007

Mrs. BOXER (for herself, Mrs. FEINSTEIN, Mr. LAUTENBERG, Mr. CARDIN, and Ms. KLOBUCHAR) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

SEPTEMBER 24 (legislative day, SEPTEMBER 17), 2008

Reported by Mrs. BOXER, with an amendment

[Strike out all after the enacting clause and insert the part printed in *italie*]

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**A BILL**

To amend the Safe Drinking Water Act to protect the health of pregnant women, fetuses, infants, and children by requiring a health advisory and drinking water standard for perchlorate.

1       *Be it enacted by the Senate and House of Representa-*  
2       *tives of the United States of America in Congress assembled,*

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “Protecting Pregnant  
3 Women and Children From Perchlorate Act of 2007”.

4 **SEC. 2. FINDINGS AND PURPOSES.**

5 (a) FINDINGS.—Congress finds that—

6 (1) perchlorate—

7 (A) is a chemical used as the primary in-  
8 gredient of solid rocket propellant; and

9 (B) is also used in fireworks, road flares,  
10 and other applications;

11 (2) waste from the manufacture and improper  
12 disposal of chemicals containing perchlorate is in-  
13 creasingly being discovered in soil and water;

14 (3) according to the Government Accountability  
15 Office, perchlorate contamination has been detected  
16 in water and soil at almost 400 sites in the United  
17 States, with concentration levels ranging from 4  
18 parts per billion to millions of parts per billion;

19 (4) the Government Accountability Office has  
20 determined that the Environmental Protection Agen-  
21 cy does not centrally track or monitor perchlorate  
22 detections or the status of perchlorate cleanup, so a  
23 greater number of contaminated sites may already  
24 exist;

25 (5) according to the Government Accountability  
26 Office, limited Environmental Protection Agency

1 data show that perchlorate has been found in 35  
2 States and the District of Columbia and is known to  
3 have contaminated 153 public water systems in 26  
4 States;

5 (6) those data are likely underestimates of total  
6 drinking water exposure, as illustrated by the find-  
7 ing of the California Department of Health Services  
8 that perchlorate contamination sites have affected  
9 approximately 276 drinking water sources and 77  
10 drinking water systems in the State of California  
11 alone;

12 (7) Food and Drug Administration scientists  
13 and other scientific researchers have detected per-  
14 chlorate in the United States food supply, including  
15 in lettuce, milk, cucumbers, tomatoes, carrots, canta-  
16 loupe, wheat, and spinach, and in human breast  
17 milk;

18 (8)(A) perchlorate can harm human health, es-  
19 pecially in pregnant women and children, by inter-  
20 fering with uptake of iodide by the thyroid gland,  
21 which is necessary to produce important hormones  
22 that help control human health and development;

23 (B) in adults, the thyroid helps to regulate me-  
24 tabolism;

1           (C) in children, the thyroid helps to ensure  
2 proper mental and physical development; and

3           (D) impairment of thyroid function in expectant  
4 mothers or infants may result in effects including  
5 delayed development and decreased learning capa-  
6 bility;

7           (9)(A) in October 2006, researchers from the  
8 Centers for Disease Control and Prevention pub-  
9 lished the largest, most comprehensive study to date  
10 on the effects of low levels of perchlorate exposure  
11 in women, finding that—

12               (i) significant changes existed in thyroid  
13 hormones in women with low iodine levels who  
14 were exposed to perchlorate; and

15               (ii) even low-level perchlorate exposure may  
16 affect the production of hormones by the thy-  
17 roid in iodine-deficient women; and

18           (B) in the United States, about 36 percent of  
19 women have iodine levels equivalent to or below the  
20 levels of the women in the study described in sub-  
21 paragraph (A); and

22           (10) the Environmental Protection Agency has  
23 not established a health advisory or national primary  
24 drinking water regulation for perchlorate, but in-  
25 stead established a “Drinking Water Equivalent

1 Level of 24.5 parts per billion for perchlorate,  
2 which—

3 (A) does not take into consideration all  
4 routes of exposure to perchlorate;

5 (B) has been criticized by experts as fail-  
6 ing to sufficiently consider the body weight,  
7 unique exposure, and vulnerabilities of certain  
8 pregnant women and fetuses, infants, and chil-  
9 dren; and

10 (C) is based primarily on a small study  
11 and does not take into account new, larger  
12 studies of the Centers for Disease Control and  
13 Prevention or other data indicating potential ef-  
14 fects at lower perchlorate levels than previously  
15 found.

16 (b) PURPOSES.—The purposes of this Act are—

17 (1) to require the Administrator of the Environ-  
18 mental Protection Agency to establish, by not later  
19 than 90 days after the date of enactment of this  
20 Act, a health advisory for perchlorate in drinking  
21 water that fully protects pregnant women, fetuses,  
22 infants, and children, taking into consideration body  
23 weight and exposure patterns and all routes of expo-  
24 sure to perchlorate; and

1           (2) to require the Administrator of the Environ-  
 2           mental Protection Agency to establish promptly a  
 3           national primary drinking water regulation for per-  
 4           chlorate that fully protects pregnant women, fetuses,  
 5           infants, and children, taking into consideration body  
 6           weight and exposure patterns and all routes of expo-  
 7           sure to perchlorate.

8   **SEC. 3. HEALTH ADVISORY AND NATIONAL PRIMARY**  
 9                   **DRINKING WATER REGULATION FOR PER-**  
 10                   **CHLORATE.**

11           Section 1412(b)(12) of the Safe Drinking Water Act  
 12   (~~42 U.S.C. 300g-1(b)(12)~~) is amended by adding at the  
 13   end the following:

14                   “(C) PERCHLORATE.—

15                   “(i) SCHEDULE, HEALTH ADVISORY,  
 16                   AND STANDARD.—Notwithstanding any  
 17                   other provision of this section, the Admin-  
 18                   istrator shall publish a health advisory and  
 19                   promulgate a national primary drinking  
 20                   water regulation for perchlorate, in accord-  
 21                   ance with the schedule and provisions es-  
 22                   tablished by this subparagraph, that fully  
 23                   protect, with an adequate margin of safety,  
 24                   the health of vulnerable persons (including  
 25                   pregnant women, fetuses, infants, and chil-

dren), taking into consideration body weight, exposure patterns, and all routes of exposure.

“(ii) HEALTH ADVISORY.—Not later than 90 days after the date of enactment of this subparagraph, the Administrator shall publish a health advisory for perchlorate in accordance with clause (i).

“(iii) PROPOSED REGULATIONS.—Not later than August 1, 2007, the Administrator shall propose a national primary drinking water regulation for perchlorate in accordance with clause (i).

“(iv) FINAL REGULATIONS.—Not later than December 31, 2007, after providing notice and an opportunity for public comment, the Administrator shall promulgate a national primary drinking water regulation for perchlorate in accordance with clause (i).”.

## **SECTION 1. SHORT TITLE.**

*This Act may be cited as the “Protecting Pregnant Women and Children From Perchlorate Act of 2008”.*

## **SEC. 2. FINDINGS AND PURPOSES.**

*(a) FINDINGS.—Congress finds that—*

1           (1) perchlorate—

2                   (A) is a chemical used as the primary in-  
3                   gredient of solid rocket propellant; and

4                   (B) is also used in fireworks, road flares,  
5                   and other applications;

6           (2) waste from the manufacture and improper  
7           disposal of chemicals containing perchlorate is in-  
8           creasingly being discovered in soil and water;

9           (3) according to the Government Accountability  
10          Office, perchlorate contamination has been detected in  
11          water and soil at almost 400 sites in the United  
12          States, with concentration levels ranging from 4 parts  
13          per billion to millions of parts per billion;

14          (4) the Government Accountability Office has de-  
15          termined that the Environmental Protection Agency  
16          does not centrally track or monitor perchlorate detec-  
17          tions or the status of perchlorate cleanup, so a greater  
18          number of contaminated sites may already exist;

19          (5) according to the Government Accountability  
20          Office, limited Environmental Protection Agency data  
21          show that perchlorate has been found in 35 States  
22          and the District of Columbia and is known to have  
23          contaminated 153 public water systems in 26 States;

24          (6) those data are likely underestimates of total  
25          drinking water exposure, as illustrated by the finding



1       *of the California Department of Health Services that*  
2       *perchlorate contamination sites have affected approxi-*  
3       *mately 274 drinking water sources and 82 drinking*  
4       *water systems in the State of California alone;*

5           *(7) Food and Drug Administration scientists*  
6       *and other scientific researchers have detected per-*  
7       *chlorate in the United States food supply, including*  
8       *in lettuce, milk, cucumbers, tomatoes, carrots, canta-*  
9       *loupe, wheat, and spinach, and in human breast*  
10       *milk;*

11           *(8)(A) perchlorate can harm human health, espe-*  
12       *cially in pregnant women and children, by inter-*  
13       *fering with uptake of iodide by the thyroid gland,*  
14       *which is necessary to produce important hormones*  
15       *that help control human health and development;*

16           *(B) in adults, the thyroid helps to regulate me-*  
17       *tabolism;*

18           *(C) in children, the thyroid helps to ensure prop-*  
19       *er mental and physical development; and*

20           *(D) impairment of thyroid function in expectant*  
21       *mothers or infants may result in effects including de-*  
22       *layed development and decreased learning capability;*

23           *(9)(A) in October 2006, researchers from the*  
24       *Centers for Disease Control and Prevention published*  
25       *the largest, most comprehensive study to date on the*

1       *effects of low levels of perchlorate exposure in women,*  
2       *finding that—*

3               *(i) significant changes existed in thyroid*  
4               *hormones in women with low iodine levels who*  
5               *were exposed to perchlorate; and*

6               *(ii) even low-level perchlorate exposure may*  
7               *affect the production of hormones by the thyroid*  
8               *in iodine-deficient women; and*

9               *(B) in the United States, about 36 percent of*  
10              *women have iodine levels equivalent to or below the*  
11              *levels of the women in the study described in subpara-*  
12              *graph (A); and*

13              *(10) the Environmental Protection Agency has*  
14              *not established a health advisory or national primary*  
15              *drinking water regulation for perchlorate, but instead*  
16              *established a “Drinking Water Equivalent Level” of*  
17              *24.5 parts per billion for perchlorate, which—*

18                      *(A) does not take into consideration all*  
19                      *routes of exposure to perchlorate;*

20                      *(B) has been criticized by experts as failing*  
21                      *to sufficiently consider the body weight, unique*  
22                      *exposure, and vulnerabilities of certain pregnant*  
23                      *women and fetuses, infants, and children; and*

24                      *(C) is based primarily on a small study*  
25                      *and does not take into account new, larger stud-*

1            *ies of the Centers for Disease Control and Pre-*  
2            *vention or other data indicating potential effects*  
3            *at lower perchlorate levels than previously found.*

4            *(b) PURPOSES.—The purposes of this Act are—*

5            *(1) to require the Administrator of the Environ-*  
6            *mental Protection Agency to establish, by not later*  
7            *than 90 days after the date of enactment of this Act,*  
8            *a health advisory for perchlorate in drinking water*  
9            *that—*

10            *(A) is fully protective of, and considers, the*  
11            *body weight and exposure patterns of pregnant*  
12            *women, infants, and children;*

13            *(B) provides an adequate margin of safety;*  
14            *and*

15            *(C) takes into account all routes of exposure*  
16            *to perchlorate;*

17            *(2) to require the Administrator of the Environ-*  
18            *mental Protection Agency to establish not later than*  
19            *18 months after the date of enactment of this Act a*  
20            *national primary drinking water regulation for per-*  
21            *chlorate that fully protects pregnant women, infants,*  
22            *and children, taking into consideration body weight,*  
23            *exposure patterns, and all routes of exposure to per-*  
24            *chlorate.*

1 **SEC. 3. HEALTH ADVISORY AND NATIONAL PRIMARY DRINK-**  
 2 **ING WATER REGULATION FOR PERCHLORATE.**

3 *Section 1412(b)(12) of the Safe Drinking Water Act*  
 4 *(42 U.S.C. 300g-1(b)(12)) is amended by adding at the end*  
 5 *the following:*

6 “(C) *PERCHLORATE.*—

7 “(i) *HEALTH ADVISORY.*—*Notwith-*  
 8 *standing any other provision of this section,*  
 9 *not later than 90 days after the date of en-*  
 10 *actment of this subparagraph, the Adminis-*  
 11 *trator shall publish a health advisory for*  
 12 *perchlorate that is fully protective, with an*  
 13 *adequate margin of safety, of the health of*  
 14 *vulnerable persons (including pregnant*  
 15 *women, infants, and children), taking into*  
 16 *consideration body weight, exposure pat-*  
 17 *terns, and all routes of exposure.*

18 “(ii) *PROPOSED REGULATIONS.*—*Not-*  
 19 *withstanding any other provision of this*  
 20 *section, the Administrator shall propose*  
 21 *(within 9 months of the date of enactment*  
 22 *of this subparagraph) and shall finalize*  
 23 *(within 18 months of the date of enactment)*  
 24 *a national primary drinking water regula-*  
 25 *tion for perchlorate—*

1                   “(I) that based on the factors in  
2                   clause (i) and other relevant data, is  
3                   protective, with an adequate margin of  
4                   safety, of vulnerable persons (including  
5                   pregnant women, infants, and chil-  
6                   dren); and  
7                   “(II) the maximum contaminant  
8                   level of which is as close to the max-  
9                   imum contaminant level goal for per-  
10                  chlorate, and as protective of vulner-  
11                  able persons, as is feasible.”.

**Calendar No. 1055**

110<sup>TH</sup> CONGRESS  
2<sup>D</sup> Session

**S. 150**

[Report No. 110-484]

**A BILL**

To amend the Safe Drinking Water Act to protect the health of pregnant women, fetuses, infants, and children by requiring a health advisory and drinking water standard for perchlorate.

SEPTEMBER 24 (legislative day, SEPTEMBER 17), 2008

Reported with an amendment